In The *CLAIMS*

1. (Currently Amended) An evaporation system comprising:

an enclosure defining an evaporation region, a condensation region, and a liquid region;

a liquid in the liquid region, a surface of the liquid defining a volume of the evaporation and condensation regions;

~~a~~ an inlet in the evaporation region of the enclosure adapted to introduce an inlet feed into the enclosure;

a valve controlled port disposed for controlling flow of the liquid from ~~an outlet in~~ the liquid region of the enclosure ~~adapted to drain~~, the valve controlled port draining the liquid from the enclosure, wherein the liquid drains from the outlet at least in part by the weight of the liquid~~, and~~ and defines a mass of the liquid disposed in the liquid region;

the mass of the liquid disposed in the liquid region defining a piston, the upper level of which being determined by the valve controlled port such that the mass of liquid defines ~~wherein as liquid is drained through the outlet,~~ the volume of the evaporation and condensation regions increases and the pressure in the evaporation and condensation regions decreases in response to reduction of the mass of the liquid disposed in the liquid region to vaporize at least part of the inlet feed; and

wherein the inlet feed introduced through the inlet vaporizes in the evaporation region, condenses to a liquid in the condensation region, and the condensed liquid collects in the liquid region and wherein the flow through the outlet and the flow through the inlet is regulated to maintain a pressure in the evaporation region that tends to vaporize the inlet feed.

2. (Original) The system of Claim 1 ~~with~~ further comprising a blower disposed between the evaporation region and the condensation region, with the blower aligned for forcing a vaporized portion of the inlet feed from the evaporation

region into the condensate region to maintain the condensation region at a higher pressure than the evaporation region.

3. (Currently Amended) The system of Claim 2 ~~with~~ further comprising a heat transfer system ~~adapted and arranged to transfer heat~~ disposed in relation to the condensation region and the evaporation region such that heat is transferred from the condensation region to the evaporation ~~system~~ region.

4. (Currently Amended) The system of Claim 3 ~~with~~ further comprising an absorbing heat exchanger disposed in the condensation region and a rejecting heat ~~exchange~~ exchanger disposed in the evaporation region.

5. (Currently Amended) The system of Claim ~~5~~ 4 with the heat transfer system being a Rankine cycle heat transfer system.

6. (Original) The system of Claim 2 ~~with~~ further comprising a heat transfer system ~~adapted and arranged to transfer heat~~ disposed in relation to the condensation region and the inlet feed such that heat is transferred from the condensation region to the inlet feed.

7. (Original) The system of Claim 6 ~~with~~ further comprising an absorbing heat exchanger disposed in the condensation region and a rejecting heat ~~exchange~~ exchanger disposed in the inlet feed.

8. (Original) The system of Claim 7 with the heat transfer system being a Rankine cycle heat transfer system.

9. (Original) The system of Claim 1 ~~with~~ further comprising a degasifier connected to the inlet feed.

10. (Currently Amended) The system of Claim 1 with the enclosure including a slurry section, and a refrigeration heat ~~exchanged~~ exchanger adapted and arranged to receive ice slurry from the slurry section and chill a fluid directed across the heat exchanger.

11. (New) A method for operating an evaporation system comprising the steps of:

providing an enclosure defining an evaporation region, a condensation region, and a liquid region, with the evaporation region having an inlet and the liquid region having an outlet, and the evaporation region being in communication with the liquid region through the condensation region;

disposing a liquid in the liquid region, with a surface of the liquid disposed in the liquid region defining a volume of the evaporation and condensation regions;

introducing an inlet feed through the inlet and into the evaporation region of the enclosure;

draining the liquid through the outlet from the liquid region of the enclosure, such that the liquid drains from the outlet at least in part by the weight of the liquid and draining of the liquid through the outlet increases a volume of the evaporation and condensation regions and decreases a first pressure in the evaporation region and a second pressure in the condensation region;

collecting the liquid which condenses in the condensate region to continually provide a mass of the liquid which provides a piston in the liquid region to draw down the first pressure in the evaporation region as the liquid is drained from the liquid region; and

regulating a first rate of flow of the inlet feed into the evaporation region and a second rate of flow of the liquid from the liquid region such that the first pressure in the evaporation region is maintained below an inlet feed pressure to vaporize the inlet feed, and the second pressure in the condensation region is maintained above a condensate pressure to condense the liquid in the condensation region.

12. (New) The method according to Claim 11, further comprising the steps of:

providing a blower disposed between the evaporation region and the condensation region; and

forcing with the blower a portion of the inlet feed which has vaporized to move from the evaporation region into the condensation region.

13. (New) The method according to Claim 12, further comprising the step of:

thermally transferring heat from the liquid region to the evaporation region to increase vaporization of the inlet feed in the evaporation region.

14. (New) The method according to Claim 12, further comprising the step of absorbing heat in the condensation region and a rejecting the heat into the evaporation region.